

**Remarks:**

These remarks are responsive to the Final Office Action dated April 20, 2009. Prior to entry of the foregoing amendments, claims 1-7, 9, 10, 13-17 and 19-21 remained pending in the application. Claims 1-6 were withdrawn pursuant to an earlier restriction requirement.

In the April 20, 2009 Office Action, the Examiner:

- rejected claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite;
- rejected claims 7, 9 and 13 under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 5,666,977 to Higgins et al. ("Higgins") in view of US Patent Application Publication No. 2004/0016427 to Byron et al. ("Byron");
- rejected claims 10 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Higgins and Byron, and further in view of US Patent No. 6,354,694 to Weber et al. ("Weber");
- rejected claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Higgins in view of US Patent No. 6,299,270 to Merrill ("Merrill");
- rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Higgins and Merrill, and further in view of Byron; and
- rejected claims 19-21 under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 5,881,716 to Wirch et al. ("Wirch") in view of US Patent No. 3,900,138 to Phillips ("Phillips").

The Examiner noted, however, that claim 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph.

Applicant respectfully traverses the rejections, contending that all of the pending claims are patentable over Higgins, Byron, Weber, Merrill, Wirch and Phillips, taken alone or in any combination. Nevertheless, to expedite the issuance of a patent, and to more particularly point out and distinctly claim aspects of the invention that Applicant wants to patent now, Applicant has canceled claims 1 and 4-6 without prejudice, and amended claims 2, 3, 17 and 19. However, Applicant reserves the right to pursue any of the canceled claims and/or amended claims at a later time. Applicant also has presented remarks showing that all of the pending claims are patentable over the cited references, taken alone or in combination. Accordingly, in view of the amendments above and the remarks below, Applicant respectfully requests reconsideration of the application and prompt issuance of a Notice of Allowance covering all of the pending claims.

**A. Rejection Under 35 U.S.C. § 112**

Claim 17

Claim 17 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner notes language reciting that the distance between the upper surface of the chamber and the outer surface is less than 0.75 times “the square root of the heat transducer” is not clear. In view of the Examiner’s indication of allowable subject matter, Applicant has amended claim 17 to recite “the square root of the **area of the** heat transducer residing in that chamber.”

Applicant thus submits that claim 17 is now definite, and correspondingly, that the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn. Furthermore, in view of the Examiner's indication of allowable subject matter, Applicant submits that claim 17 is now in allowable form.

**B. Rejections Under 35 U.S.C. § 103**

Claims 7, 9, 10, 13, 14 and 16

Claims 7, 9 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higgins in view of Byron. Claims 10 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the references as applied to claim 7 above, and further in view of Weber. Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Higgins in view of Merrill, and further in view of Byron.

The present communication is accompanied by a Declaration filed under 37 C.F.R. § 1.131. The Declaration establishes prior invention of claims 7, 9, 10, 13, 14 and 16 relative to Byron by demonstrating that the subject matter of these claims was conceived before the effective date of Byron, and that Applicant worked toward diligent reduction to practice from a time before the effective date of Byron. Accordingly, the claimed invention antedates Byron and thus Byron is not prior art to the pending claims. Applicant thus submits that the rejections of claims 7, 9, 10, 13, 14 and 16 should be withdrawn.

Claims 15 and 16

Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Higgins in view of Merrill. As noted above, claim 16 stands rejected under 35 U.S.C.

§ 103(a) as being unpatentable over Higgins in view of Merrill, and further in view of Byron.

Applicant notes, however, that Merrill qualifies as prior art only under 35 U.S.C. § 102(e), and that the subject matter set forth in Merrill and the claimed invention were, at the time of invention, commonly owned (or subject to an obligation of assignment to the same owner), as indicated in the assignment records of both Merrill and the present application. Accordingly, pursuant to 35 U.S.C. § 103(c), Merrill may not be cited as prior art under 35 U.S.C. § 103(a), and the rejection of claims 15 and 16 should be withdrawn

#### Claims 19-21

Claims 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wirch in view of Phillips.

Wirch disclosed a device for dosing of liquid, the device including a droplet generator 8 with a plurality of narrow ducts 11 configured to carry liquid to a plurality of expelling jets 13. An electrical heating element and converter 14 is mounted to operate with each of the jets to expel a liquid volume from each jet. Wirch does not disclose a mouthpiece through which a user may inhale the expelled droplets, as recited in claim 19. The Examiner thus cites Phillips, asserting that “Phillips teaches the convention of providing a mouthpiece 12 to the end of the inhaler to assist inhalation by the user.”

As amended, claim 19 recites:

19. An inhaler, comprising:
  - a body;
  - a supply of medicinal liquid carried in the body;
  - a drop generator head mounted to the body in fluid communication with the medicinal liquid and having a plurality of chambers therein, each chamber receiving some of the medicinal liquid and each chamber having an orifice;

a plurality of heat transducers, one heat transducer being associated with each chamber and controlled for instantaneously heating the medicinal liquid in the chamber by an amount sufficient to produce a vapor bubble in the chamber for propelling medicinal liquid through the orifice with force sufficient for separating the propelled liquid into two or more droplets for inhalation by a user; and

a mouthpiece connected to the body and within which the droplets are introduced for inhalation by a user, the mouthpiece including a recess formed in an exterior surface thereof for directing gas to the propelled droplets inside the mouthpiece, thereby to entrain the droplets in the gas.

As set forth above, claim 19 recites a mouthpiece “including a recess formed in an exterior surface thereof for directing gas to the propelled droplets inside the mouthpiece, thereby to entrain the droplets in the gas.” Neither Phillips nor Wirch discloses a mouthpiece including such a recess. Both rely on ejection of droplets with sufficient force to propel the droplets into the patient’s mouth. In contrast, the inhaler of claim 19 provides for introduction of gas via a recess in an exterior surface of the mouthpiece (shown at reference numeral 61 in Fig. 6) such that droplets may be entrained into the gas upon user inhalation.

Claim 19 is distinguished from Wirch and Phillips for at least the foregoing reasons, and the rejection of claim 19 under 35 U.S.C. § 103(a) should be withdrawn. Claims 20 and 21 depend from claim 19, and thus are distinguished from Wirch and Phillips for at least the same reasons as claim 19. Accordingly, the rejection of claims 20 and 21 under 35 U.S.C. § 103(a) also should be withdrawn.

### **C. Conclusion**

In view of the present amendments and remarks, Applicant believes that all claims in this application are now in condition for allowance. Accordingly, Applicant respectfully

requests that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

The Commissioner is hereby authorized to charge or credit any deficiencies or over-payments to Deposit Account No. 08-2025 which may be required in connection with this filing.

Respectfully submitted,

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I hereby certify that this correspondence is being electronically transmitted to the US Patent and Trademark Office, via the EFS-Web System on June 22, 2009.

/Theresa Belland/

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